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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/651,115	08/28/2003	Keith D. Mease	TN285	7863

7590 11/14/2005

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EXAMINER	
PAPE, ZACHARY	

ART UNIT	PAPER NUMBER
2835	

DATE MAILED: 11/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No.	Applicant(s)	
	10/651,115	MEASE ET AL.	
	Examiner	Art Unit	
	Zachary M. Pape	2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 September 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

- The following detailed action is in response to the correspondence filed 9/6/2005.
- Claims 1-21 stand rejected.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Reimer (US 5,019,939).

With respect to claim 1, Reimer teaches a heat sink configured to support an edge of a circuit card, said heat sink comprising: a thermally conductive base (Generally 1) ; a plurality of thermally conductive heat dissipating fins (2, 3, and 4) extending from said base; and one or more recesses at least partially defined by at least one of said fins said one or more recesses being configured to support the edge of the circuit card (As illustrated in Fig 2, also see Column 3, Lines 23 – 30).

With respect to claim 18, Reimer further teaches a heat sink (1) guiding one or more circuit cards (22) and transferring heat from one or more heat-generating components (On 22), said heat sink comprising: a surface (Best defined by the number 1) defining one or more slots (Between 4) configured to guide an edge of a circuit card

(22); and heat dissipating fins (2, 3, and 4) thermally coupled to said surface, said heat sink being configured to provide a thermal path from a heat-generating component (On 22) to said fins via said surface (As illustrated in Fig 3, the fins facilitate drawing heat from the card to the fins (including fins 2 and 3).

With respect to claim 3, Reimer further teaches that the one or more recesses (4) are further configured to support the edge of the circuit card (22) in sliding association with said heat sink (See Figs 2 and 3, also the heat sink of Reimer could be slid off the card (22) in a lateral motion if desired).

With respect to claims 4, and 21, Reimer further teaches that the recess (4) is a slot configured to guide the edge of the circuit card during sliding movement of the circuit card (See Fig 3, also the recess would act as a guide in the event the user were to slide the heat sink onto or off of the board (22)).

With respect to claims 5 and 19, Reimer further teaches a face disposed opposite said fins (Facing downward as illustrated in Fig 1), said base being configured to be mounted with said face abutting a heat-generating component. Additionally, it has been held that the recitation that an element is "configured to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation is any patentable sense. In re Hutchison, 69 USPQ 138.

With respect to claim 6, Reimer further teaches that the recess is defined by the base (As illustrated in Fig 1, the recess (4) is formed with the base (1) and therefore is defined by the base).

With respect to claim 7, Reimer further teaches that the recess is defined by one or more of said fins (As illustrated in Fig 1, see also Column 3, Lines 23-30).

With respect to claim 8, Reimer further teaches that the recess (Between 4) has a depth smaller than the length of said fins (As illustrated in Fig 1, the depth of the recesses is miniscule in comparison to the length of the fins longitudinally).

With respect to claim 9, Reimer further teaches that the fins (4) are oriented substantially parallel to one another (As illustrated in Fig 1).

With respect to claim 15, Reimer further teaches the use of a circuit board assembly comprising: a circuit board (Generally 22); a heat generating component (Reimer implies that the circuit board 22 has a heat generating component on it since his invention relates to a thermal management system for circuit boards) mounted on said circuit board; and a heat sink (1) thermally coupled to said heat generating component (As illustrated in Fig 2) and having a plurality of fins (4) for dissipating heat, said heat sink defining a recess (Between 4) for supporting and guiding an edge of a circuit card (As illustrated in Figs 2 and 3)

With respect to claim 16, Reimer further teaches that the circuit card comprises an edge portion in sliding association with said recess (As illustrated in Fig 3).

With respect to claim 17,Reimer further teaches a connector (Fig 2 to the right of the number 22) configured for electrically coupling said circuit card (22) to a computer system, said recess (Between 4) of said heat sink being oriented to guide said circuit card for coupling said connector to said computer system (As illustrated in Fig 2 the recesses allow for the card (22) to align with the connector).

With respect to claim 20, Reimer further teaches having a substantially constant cross-sectional shape.

With respect to claims 10-14, the method steps recited in the claims are inherently necessitated by the device structure as taught by the Reimer reference.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reimer in view of Atkinson et al. (US 6,680,849).

With respect to claim 2, Reimer teaches the limitations as disclosed in claim 1 above, but fails to teach that the heat sink is formed by extrusion. Atkinson et al. teaches the conventionality of using extrusion to form a heat sink. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the extrusion method as taught by Atkinson et al. to form the heat sink of Reimer since the initial costs of tooling for new extruded parts and the time to market is much lower than the cost of die-casting (Column 4, Lines 31-35).

Response to Arguments

3. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary M. Pape whose telephone number is 571-272-2201. The examiner can normally be reached on Mon. - Thur. & every other Fri. (8:00am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached at 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ZMP

ANATOLY VORTMAN
PRIMARY EXAMINER